

इंटरनेट

मानक

Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

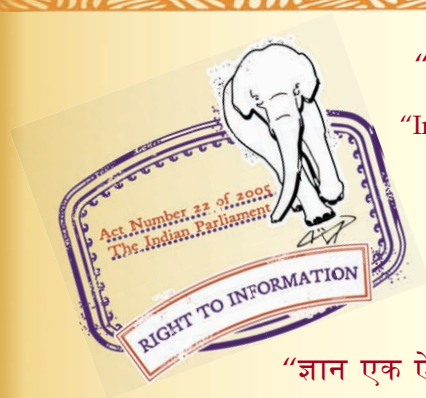
“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 9629 (2004): Maize Atta, Maize Maida and Maize Suji [FAD 16: Foodgrains, Starches and Ready to Eat Foods]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

BLANK PAGE



भारतीय मानक
मक्के का आटा, मक्के का मैदा और
मक्के की सूजी — विशिष्टि
(पहला पुनरीक्षण)

Indian Standard

MAIZE ATTA, MAIZE MAIDA AND
MAIZE SUJI — SPECIFICATION

(*First Revision*)

ICS 67.060

© BIS 2004

BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Foodgrains, Starches and Ready-to-Eat Foods Sectional Committee had been approved by the Food and Agriculture Division Council.

Maize *atta* (meal) or *makki ka atta*, as it is commonly called, is manufactured from maize grain after cleaning the grain and milling, whereas maize *maida* (*makki ka maida*) is manufactured from maize grain after cleaning, removal of germ (embryo), bran and tipcap to the maximum possible extent and milling to the desired granularity. Maize *suji* (*makki ka rava*) is manufactured by steam cooking, flaking, grinding and bolting of flaked grains to desired granularity and freeing it from bran and germ to the desired extent.

This standard is expected to help in exercising proper quality control in the manufacture of these products of good quality under hygienic conditions.

Earlier, the requirements of this standard were covered in three separate standards, namely, IS 9629 : 1980 'Specification for maize *atta*', IS 10834 : 1984 'Specification for maize *maida*' and IS 8574 : 1977 'Specification for maize *suji* or *rava* (*semolina*)'. While reviewing these standards, the Committee decided to amalgamate and update these standards into a single comprehensive user-friendly standard as the basic requirements are common in the three products. With the publication of this standard, the above mentioned standards shall be withdrawn.

In this standard, the following major modifications have been made:

- a) The limit for acid insoluble ash for maize *maida* has been reduced to correspond with the reduction in the ash content;
- b) Total protein has been prescribed on dry basis uniformly for all the three products.
- c) A maximum limit has been prescribed for aflatoxin for all the three products.

In the preparation of this standard, due consideration has been given to the *Prevention of Food Adulteration Act*, 1954 and the *Rules* framed thereunder. Due consideration has also been given to the *Standard of Weights and Measures (Packaged Commodities) Rules*, 1977. However, this standard is subject to restrictions imposed under these, wherever applicable.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

MAIZE ATTA, MAIZE MAIDA AND MAIZE SUJI — SPECIFICATION

(*First Revision*)

1 SCOPE

This standard prescribes the requirements and methods of sampling and test for maize *atta*, maize *maida* and maize *suji*.

2 REFERENCES

The following standards contain provisions which through reference in this text, constitute provision of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

<i>IS No.</i>	<i>Title</i>
460 (Part 1) : 1985	Specification for test sieves : Part 1 Wire cloth test sieves (<i>third revision</i>)
1009 : 1979	Wheat flour (<i>Maida</i>) for general purposes (<i>second revision</i>)
1155 : 1968	Specification for wheat <i>atta</i> (<i>second revision</i>)
1943 : 1995	Textiles — A-twill jute bags — Specification (<i>second revision</i>)
2491 : 1998	Food hygiene — General principles — Code of practice (<i>second revision</i>)
2566 : 1993	Specification for B-twill jute bags for packing foodgrains (<i>third revision</i>)
4684 : 1975	Specification for edible groundnut flour (expeller pressed) (<i>first revision</i>)
7219 : 1973	Method for determination of protein in foods and feeds
10171 : 1987	Guide on suitability of plastics for food packaging (<i>second revision</i>)
14818 : 2000	Cereals and pulses and milled products — Sampling of static batches

3 REQUIREMENTS

3.1 Description

Maize *atta*, maize *maida* and maize *suji* shall be obtained from clean and sound maize. They shall be in the form of powder having a characteristic colour, taste and flavour of the variety of maize (yellow or white variety).

3.2 The product shall be free from rancidity and from insect, rodent or fungus infestation. It shall also be free from fermented, musty or other objectionable odour. It shall neither have any ingredients not specified nor any extraneous matter.

3.3 The product shall also confirm to the requirements in Table 1.

3.4 Microscopic Appearance of Starch

When the finely powdered material is subject to microscopic examination, the starch granules shall have the characteristic appearance as shown in the photomicrograph reproduced in Fig. 1, revealing uniform polygonal or round in shape. The hilum is fairly marked and is starred with fissures but no striae are observed. Distinct polarized crosses are seen.

3.5 Hygienic Conditions

The material shall be manufactured, packed, stored and distributed under hygienic conditions (*see* IS 2491).

4 PACKING AND MARKING

4.1 Packing

4.1.1 The product shall be packed in clean, single and sound A-twill bags conforming to IS 1943 or B-twill jute bags conforming to IS 2566 or in food grade plastic material (*see* IS 10171) or in any other food grade packing material as agreed to between the purchaser and the supplier.

4.1.2 If packed in jute bags, the mouth of each bag shall be either machine-stitched or hand stitched. If it is hand stitched, the mouth shall be rolled over and then stitched.

FIG. 1 PHOTOMICROGRAPH OF MAIZE STARCH ($\times 700$)Table 1 Requirements for Maize *Atta*, Maize *Maida* and Maize *Suji*
(Clause 3.3)

Sl No.	Characteristics	Requirement			Method of Test, Ref to
		Maize <i>Atta</i> (3)	Maize <i>Maida</i> (4)	Maize <i>Suji</i> (5)	
(1)	(2)				(6)
i)	Moisture, percent by mass, <i>Max</i>	13.0	13.0	13.0	Annex A of IS 1009
ii)	Total ash (on dry basis), percent by mass, <i>Max</i>	2.0	1.0	1.2	Annex B of IS 1009
iii)	Acid insoluble ash (on dry basis), percent by mass, <i>Max</i>	0.1	0.05	0.05	Annex C of IS 1009
iv)	Alcoholic acidity (on dry basis), percent by mass, <i>Max</i>	0.30	0.30	0.20	Annex E of IS 1009
v)	Crude fibre (on dry basis), percent by mass, <i>Max</i>	2.0	1.0	1.2	Annex E of IS 1155
vi)	Protein (on dry basis), percent by mass, <i>Min</i>	8.0	7.0	7.0	IS 7219
vii)	Granularity	To satisfy test	To satisfy test	—	Annex A of this standard
viii)	Aflatoxin, 5g/kg, <i>Max</i>	30	30	30	Annex J of IS 4684

4.2 Marking

4.2.1 The package shall bear legibly and indelibly the following information:

- a) Name of the material, and brand name, if any;
- b) Name and address of the manufacturer;
- c) Batch or code number;
- d) Month and year of manufacturing or packing;
- e) Net mass;
- f) The words 'Best before.....' (month and year to be indicated); and
- g) Any other information as specified under the *Prevention of Food Adulteration Act, 1954* and the *Rules* framed thereunder and *Standards of Weights and Measures (Packaged Commodities), Rules, 1977*.

4.3 BIS Standard Marking

The product may also be marked with the BIS Standard Mark.

4.3.1 The use of the Standard Mark is governed by the provisions of *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

5 SAMPLING

Representative samples of the material shall be drawn and tested for conformity to this standard as prescribed in IS 14818.

ANNEX A

[Table 1, Sl No. (vii)]

DETERMINATION OF GRANULARITY

A-1 PROCEDURE

A-1.1 Maida Atta

Transfer about 10 g of the material to 600 micron IS Sieve [see IS 460 (Part 1)] and sieve for 2 min. Brush the upper surface of the sieve and sieve again for 1 min. The material shall be considered to satisfy the requirements of the test if the residue left on the sieve does not exceed 0.2 percent by weight.

A-1.2 Maize Maida

Transfer about 10 g of the material to 355 micron IS Sieve [see IS 460 (Part 1)] and sieve for 2 min. Brush the upper surface of the sieve and sieve again for 1 min. The material shall be considered to satisfy the requirements of the test, if no residue is left on the sieve.

Bureau of Indian Standards

BIS is a statutory institution established under the *Bureau of Indian Standards Act, 1986* to promote harmonious development of the activities of standardization, marking and quality certification of goods and attending to connected matters in the country.

Copyright

BIS has the copyright of all its publications. No part of these publications may be reproduced in any form without the prior permission in writing of BIS. This does not preclude the free use, in the course of implementing the standard, of necessary details, such as symbols and sizes, type or grade designations. Enquiries relating to copyright be addressed to the Director (Publications), BIS.

Review of Indian Standards

Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the latest issue of 'BIS Catalogue' and 'Standards: Monthly Additions'.

This Indian Standard has been developed from Doc : No. FAD 16 (1278).

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

BUREAU OF INDIAN STANDARDS

Headquarters :

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110 002
Telephones : 2323 0131, 2323 33 75, 2323 9402

Telegrams : Manaksanstha
(Common to all offices)

Regional Offices :

	Telephone
Central : Manak Bhavan, 9 Bahadur Shah Zafar Marg NEW DELHI 110 002	{ 2323 7617 2323 3841
Eastern : 1/14 C.I.T. Scheme VII M, V. I. P. Road, Kankurgachi KOLKATA 700 054	{ 2337 8499, 2337 8561 2337 8626, 2337 9120
Northern : SCO 335-336, Sector 34-A, CHANDIGARH 160 022	{ 60 3843 60 9285
Southern : C.I.T. Campus, IV Cross Road, CHENNAI 600 113	{ 2254 1216, 2254 1442 2254 2519, 2254 2315
Western : Manakalaya, E9 MIDC, Marol, Andheri (East) MUMBAI 400 093	{ 2832 9295, 2832 7858 2832 7891, 2832 7892
Branches : AHMEDABAD. BANGALORE. BHOPAL. BHUBANESHWAR. COIMBATORE. FARIDABAD. GHAZIABAD. GUWAHATI. HYDERABAD. JAIPUR. KANPUR. LUCKNOW. NAGPUR. NALAGARH. PATNA. PUNE. RAJKOT. THIRUVANANTHAPURAM. VISAKHAPATNAM.	